DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. 244TVP01 Issue Date: September 24, 2002
Application No. A000244 Expiration Date: September 23, 2007

Admin Revision 1, May 23, 2003

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Alaska Interstate Construction LLC** , for the operation of the **Deadhorse Soil Remediation Unit.**

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

All facility-specific terms and conditions of Air Quality Control Permit-to-Operate No. 9740-AA001 have been incorporated into this Operating Permit.

This Operating Permit becomes effective September 24, 2002.

John F. Kuterbach, Manager

Air Permits Program

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List of Abbreviations Used in this Permit

AAC .....Alaska Administrative Code
ADEC.....Alaska Department of Environmental Conservation
AS.....Alaska Statutes
ASTM.....American Society for Testing and Materials
BACT.....Best Available Control Technology
C.F.R. .....Code of Federal Regulations
CO.....Carbon Monoxide
dscf.....Dry standard cubic foot
EPA.....US Environmental Protection Agency
gr./dscf.....grain per dry standard cubic foot (1 pound = 7000 grains)
GPH.....gallons per hour
HAPs or HACs.....Hazardous Air Pollutants or Hazardous Air Contaminants [*HAPs* or *HACs* as defined in AS 46.14.990(14)]
ID.....Source Identification Number
kPa.....kiloPascals
LAER .....Lowest Achievable Emission Rate
MACT .....Maximum Achievable Control Technology
MR&R.....Monitoring, Recordkeeping, and Reporting
NESHAPs.....Federal National Emission Standards for Hazardous Air Pollutants *[NESHAPS* as defined in 40 C.F.R. 61]
NO_X.....Nitrogen Oxides
NSPS.....Federal New Source Performance Standards [*NSPS* as defined in 40 C.F.R. 60]
O & M .....Operation and Maintenance
O_2 .....Oxygen
ppm.....Parts per million
PM-10 .....Particulate Matter less than ten microns in diameter
PSD .....Prevention of Significant Deterioration
PTE.....Potential to Emit
SIC. .....Standard Industrial Classification
SO_2.....Sulfur dioxide
TPH .....Tons per hour
TPY .....Tons per year
VOC .....volatile organic compound [*VOC* as defined in 18 AAC 50.990(103)]
wt%.....weight percent

Section 1. Identification

Names and Addresses

Permittee:	**Alaska Interstate Construction LLC** PO Box 233769 Anchorage, Alaska 99523
Facility Name:	**Deadhorse Soil Remediation Unit.**
Location:	70° 15′ 26″ North; 148° 37′ 08″ West
Physical Address:	AIC SRU Yard Deadhorse, Alaska 99734
Owner:	Alaska Interstate Construction, LLC PO Box 233769 Anchorage, Alaska 99523
Operator:	Alaska Interstate Construction, LLC
Permittee's Responsible Official	David Thomas
Designated Agent:	John Ellsworth 2525 C Street Anchorage, Alaska 99518
Facility and Building Contact:	Ed Schmidt AIC SRU Yard Deadhorse, Alaska 99734 (907) 562-2792
Fee Contact:	Mara Ferderber PO Box 233769 Anchorage, Alaska 99523

Facility Process Description

SIC Code of the Facility:	4953 and 4959 Refuse Systems. Waste incineration Sanitary Services Not Otherwise classified, Oil Spill Cleanup

[18 AAC 50.350(b)(1), 1/18/97]

Section 2. General Emission Information

[18 AAC 50.350(b)(1), 1/18/97]

Emissions of Regulated Air Contaminants, as provided in the Permittee's application:

Nitrogen Oxides, Carbon Monoxide, Sulfur Dioxide, Particulate Matter and Volatile Organic Compounds

Facility Classifications:

(1) 18 AAC 50.300(b)(1)(A)

Operating Permit Classifications:

(1) 18 AAC 50.325(b)(1)

Section 3. Source Inventory and Description

[18 AAC 50.350(d)(2) 1/18/97]

Sources listed in Table 1 have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only.

Table 1 - Source Inventory

ID	Source Name	Source Description	Rating/size	Installation Date
1	Soil Remediation Unit	Thermo tech Systems SRU 25-2	25 tons per hour	1991
2	Backup Generator	Hawthorne	350kW	1991

Table Notes: 1- Both sources can burn either natural gas or #2 diesel fuel.

Section 4. Fee Requirements

1. Assessable Emissions. The Permittee shall pay to the department annual emission fees based on the facility's assessable emissions as determined by the department under 18 AAC50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The department will assess fees per ton of each air contaminant that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of:

[18 AAC 50.400 – 50.420, 1/18/97]

1.1 The facility's assessable potential to emit of 307.9TPY (107.0 TPY NO_X, 24.6 TPY CO, 162.8 TPY SO_2, 13.5 TPY PM-10); or

1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the department, when demonstrated by:

a. an enforceable test method described in 18 AAC 50.220;

b. material balance calculations;

c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d. other methods and calculations approved by the department.

[18 AAC 50.350(c) & 50.410, 1/18/97]

2. Assessable Emissions Estimates. Emission fees will be assessed as follows:

2.1 no later than March 31 of each year, the Permittee may submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emission Estimate, 410 Willoughby Ave., Suite 303, Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the department can verify the estimates; or

2.2 if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit listed in condition 1.1.

[18 AAC 50.350(c) & 50.410, 1/18/97]

Section 5. Source-Specific Requirements

All Fuel-Burning Equipment

3. Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID(s) 1 and 2 listed in Table 1 to reduce visibility through the exhaust effluent by either;

a. greater than 20 percent for a total of more than three minutes in any one hour; or[1]

[18 AAC 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98]

b. more than 20 per cent averaged over six consecutive minutes.

[18 AAC 50.055(a)(1), 5/03/02]

3.1 The Permittee shall monitor, record and report visible emissions for Source ID(s) 1 and 2 in accordance with Section 13.

[18 AAC 50.055(a)(1), 5/03/02 & 50.350(g) – (i), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]

4. Particulate Matter. The Permittee shall not cause or allow particulate matter emitted from Source ID(s) 1 and 2 listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours. The Permittee shall monitor, record and report particulate matter for Source ID(s) 1 and 2 in accordance with Section 13.

[18 AAC 50.055(b)(1) & 50.350(g) – (i), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]

5. Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from Source ID(s) 1and 2 listed in Table 1 to exceed 500 ppm averaged over three hours. The Permittee shall monitor, record, and report sulfur compound emissions as follows:

[18 AAC 50.055(c), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]

5.1 For diesel fuel [2]:

a. Monitoring -

[18 AAC 50.350(g), 1/18/97]

(i) **Either** obtain a certified statement for each fuel shipment from the fuel supplier of the fuel sulfur content of the shipment, or that the fuel oil grade is DF-1 or DF-2 (distillate fuel)[3]; **or**

[1] The aggregate standard will be deleted as an applicable requirement after EPA approves a change to the SIP. The department will notify the permittee in writing when this occurs.

[2] *Oil* means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil, as defined in 40 C.F.R. 60.42b, effective 7/1/99.

(ii) Analyze a representative sample of the fuel shipment to determine the sulfur content using ASTM method D129-00, D1266-98, D1552-95, D2622-98, D4294-98, or D4045-99, and if the fuel sulfur is found to be greater than 0.5 wt% sulfur, then calculate the sulfur compound emissions rate using the SO_2 Material Balance equations found in Section 15.

b. Recordkeeping - Record the fuel sulfur content or the fuel grade of each shipment required under condition 5.1a(i) and record all material balance calculations required under condition 5.1a(ii).

[18 AAC 50.350(h), 1/18/97]

c. Reporting -

[18 AAC 50.350(i), 1/18/97]

(i) Report as excess emissions, in accordance with condition 49, whenever the fuel combusted causes sulfur compound emissions to exceed the standard of condition 5. Include in the excess emission report the material balance calculations, in ppm of SO_2 required under condition 5.1a(ii).

(ii) Include copies of the records required under condition 5.1b with the facility operating report required under condition 50.

5.2 For fuel gas

a. Monitoring -

[18 AAC 50.350(g), 1/18/97]

(i) **Either** obtain a certified semiannual statement from the fuel supplier of the fuel gas H_2S concentration in ppm, **or**

(ii) analyze a representative sample of the fuel semiannually to determine the sulfur content using 40 C.F.R. 60, Appendix A, Method 11.

b. Recordkeeping - Keep records of the certified semiannual statement from the fuel supplier or the sulfur content analysis required conditions 5.2a(i) or 5.2a(ii).

[18 AAC 50.350(h), 1/18/97]

c. Reporting -

[18 AAC 50.350(i), 1/18/97]

(i) Report as excess emissions, in accordance with condition 49, whenever the fuel combusted causes sulfur compound emissions to exceed the standard of condition 5.

[3] *Distillate oil* means fuel oil that contain 0.05 weight percent nitrogen or less and complies with the specifications for fuel oil numbers 1 or 2 in American Society of Testing and Material (ASTM) D 396-78, "Standard Specifications for Fuel Oils", as defined in 40 C.F.R. 60.41c, effective 7/1/99.

(ii) Include copies of the records required by condition 5.2b with the facility operating report required by condition 50.

[18 AAC 50.350(i), 1/18/97]

Section 6. Facility-Wide Requirements

6. The Permittee may only treat materials contaminated with crude oil, petroleum distillates, solvent, lube oil, multipurpose transmission fluid, hydraulic oil, methanol, ethylene glycol, therminol, sea water, brine, produced water, water gel and water based muds that are not regulated as hazardous waste per 40 CFR 261 and 18 AAC 62.

[Operating Permit 9740-AA001, 1/14/97, Condition 3]
[18AAC50.350(d)(1)(D), 1/18/97]

7. The Permittee may treat wash rack sludge not regulated as a hazardous waste per 40 CFR 261 and 18 AAC 62 if

7.1 The wash rack sludge has been dewatered and allowed to solidify prior to remediation; and

7.2 The wash rack sludge has not been mixed with other materials prior to remediation.

[Operating Permit 9740-AA001, 1/14/97; Condition 3]
[18AAC50.350(d)(1)(D), 1/18/97]

8. The Permittee shall:

8.1 Install, maintain and operate, in a manner consistent with manufacturer's recommended operating and maintenance procedures, fuel burning equipment, process equipment, emissions control systems, and monitoring equipment to provide optimum control of air contaminant emissions during all operating periods.

8.2 Inspect every component of the control device prior to the first operation of the facility each year and repair or replace any component which shows signs of deterioration. A copy of the inspection report is to be included with the Facility Operating report required by Condition 50.

8.3 Not move or remove emission and process monitors required by this permit without department approval.

[Operating Permit 9740-AA001, 1/14/97; Condition 4]
[18AAC50.350(d)(1)(D), 1/18/97]

9. The Permittee shall operate the soil remediation unit so the exhaust stack concentration of carbon monoxide does not exceed 100 parts per million corrected to 7 percent oxygen, one hour average, based on a 5-minute average measurement by the Continuous Emission Monitor System required by Condition 19.

[Operating Permit 9740-AA001, 1/14/97; Condition 6]
[18AAC50.350(d)(1)(D), 1/18/97]

10. The Permittee shall preheat and post heat the secondary combustion chamber to completely combust any organic vapors from the primary chamber during startup and shutdown.

[Operating Permit 9740-AA001, 1/14/97; Condition 7]
[18AAC50.350(d)(1)(D), 1/18/97]

11. The Permittee shall operate the soil remediation unit at a capacity no greater than the capacity for which source testing demonstrates compliance.

[Operating Permit 9740-AA001, 1/14/97; Condition 8]
[18AAC50.350(d)(1)(D), 1/18/97]

12. The Permittee shall maintain the minimum pressure drop in inches of water across the baghouse at all times for which source testing demonstrates compliance.

[Operating Permit 9740-AA001, 1/14/97; Condition 9]
[18AAC50.350(d)(1)(D), 1/18/97]

13. The Permittee shall:

13.1 Control all sources of fugitive emissions to prevent release of material beyond the property line of the facility, including the following:

a. Material piles

b. Material and product conveyors

c. Kilns and hoppers

d. Control device dust handling system; and

e. Roadways under the control of the Permittee

13.2 Promptly repair any holes in ducts, shrouds, conveyors or malfunctioning equipment which contributes to the release of fugitive dust.

13.3 Comply with the Fugitive Dust and VOC Control Plan in Section 12.

[Operating Permit 9740-AA001, 1/14/97; Condition 10]
[18AAC50.350(d)(1)(D), 1/18/97]

14. The Permittee shall maintain a supply of new replacement bags at the facility equal to or greater than 10% of the number of bags required for the baghouse.

[Operating Permit 9740-AA001, 1/14/97; Condition 11]
[18AAC50.350(d)(1)(D), 1/18/97]

15. The Permittee shall not commence operations if the specific location or operation needs a Contaminated Sites Project Work Plan as required by 18 AAC 75.327, until the department has approved the Work Plan.

[Operating Permit 9740-AA001, 1/14/97; Condition 12]
[18AAC50.350(d)(1)(D), 1/18/97]

16. The Permittee shall neither modify nor replace any process or fuel burning equipment which might result in increased potential air contaminant emissions or constitutes a modification as described by 18 AAC 50.990(56), without first notifying the department 30 days in advance. The notification must be in writing and must include a description of the proposed change and an estimate of any change in the quantity of emissions of each regulated air contaminant which may occur as the result of the modification or replacement.

[Operating Permit 9740-AA001, 1/14/97; Condition 13]
[18AAC50.350(d)(1)(D), 1/18/97]

17. The Permittee shall perform source emission tests of the soil remediation unit exhaust for particulate matter, carbon monoxide, and continuous emissions monitor certifications required by Condition 20, every 30,000 tons of treated soil to ascertain the concentrations and mass emission rates of particulate matter and operating parameters using methods specified in Section 9.

17.1 If the unit treats more than 30,000 tons per year and had a grain loading less than 0.05 gr/dscf and met performance specifications 3 and 4 for the CEMS, then a yearly source test is sufficient.

17.2 The Permittee shall conduct the source test at the maximum soil fines (<200 mesh) content and the maximum operating rate of the facility, or maximum anticipated operating rate in accordance with Reference Methods 1-5, 9, and 10 as specified in 40 CFR 60, Appendix A.

[Operating Permit 9740-AA001, Condition 14; 1/14/97]
[18AAC50.350(d)(1)(D), 1/18/97]

18. The Permittee may be required to source test at any time if deterioration is suspected or if deemed necessary to ascertain compliance with applicable standards or emission limits.

[Operating Permit 9740-AA001, Condition 15; 1/14/97]
[18AAC50.350(d)(1)(D), 1/18/97]

19. The Permittee shall install, calibrate, operate, and maintain a continuous emission monitoring system (CEM) to measure and record the emissions of carbon monoxide (CO) and oxygen (O_2) in the soil remediation unit exhaust stack.

19.1 Record and report according to Section 10.

19.2 Monitor and record once per day the afterburner outlet temperature (^oF).

19.3 The systems shall be installed and calibrated per 40 CFR 60, Appendix B, and Performance Specification 3 & 4. A Quality Assurance Plan shall satisfy the requirements of 40 CFR 60, Appendix F

a. CO/O_2 CEM span values not to exceed (NTE) 250 ppm and NTE 25% O_2.

b. A relative accuracy test audit (RATA) must be conducted within 90 operating days of startup.

c. A 3 point calibration is required every 90 operating days. Calibration gas to be CRM or Protocol 1. Maximum strength is 150 ppm CO and 25% O_2. Calibration can be conducted coincident with a gas cylinder gas audit (CGA).

d. A CGA is allowed in lieu of a relative accuracy audit if the CO averages less than 50 ppm.

e. For a CGA with a CRM or Protocol 1 low range audit gas, the low range CO concentration must be anywhere from 15 to 45 ppm and from 75 to 150 ppm for the high range audit gas.

f. Use a CO wand at least every 90 operating days to check for leaking fittings or valves on the sample line. Also leak check just after sample line fitting or valve setting is changed.

g. Table of daily calibration drift limits:

DAILY CALIBRATION DRIFT LIMITS[1]

Time Period	CO ppm	% O_2	Action Required[4]
6 out of 7 consecutive days[2]	12.5	0.5[3]	Adjust
One day	25	1.0	Adjust
5 consecutive days	5	1.0	Out of control repair/replace
One day	50	2.0	Out of control repair/replace

Note 1 based upon a span value of 250 ppm for CO and 21.9% for O2. To be conducted at the zero and high level values.
Note 2 7-day drift test without adjustment.
Note 3 for 7 out of 7 consecutive days.
Note 4 when limit is exceeded.

[Operating Permit 9740-AA001, Condition 16 & Exhibit C; 1/14/97]
[18AAC50.350(d)(1)(D), 1/18/97]

20. The Permittee shall certify each continuous emission monitoring system installed as required by Condition 19 in accordance with the procedures set out in 40 CFR Part 60, Appendix B, Performance Specification 3 and 4, and submit a certification report.

[Operating Permit 9740-AA001, Condition 17; 1/14/97]
[18AAC50.350(d)(1)(D), 1/18/97]

21. The Permittee shall continuously monitor the pressure drop across the control device and record representative values for each day of operation.

[Operating Permit 9740-AA001, Condition 18; 1/14/97]
[18AAC50.350(d)(1)(D), 1/18/97]

22. If any continuous emission monitor (CEM) is malfunctioning or non-operable for three or more consecutive days, Permittee shall report this as a permit deviation in accordance with condition 49. If CEM failure is the CO monitor, the secondary combustion chamber temperature shall be kept above 1500^{o}F and shall be continuously recorded until the CO monitor is back in service.

[Operating Permit 9740-AA001, Condition 20; 1/14/97]
[18AAC50.350(d)(10(D), 1/18/97]

Section 7. Insignificant Sources

For sources at the facility that are insignificant as defined in 18 AAC 50.335(q)-(v) that are not listed in this permit, the following apply:

23. The Permittee shall submit the compliance certifications of conditions 3, 4 and 5 based on reasonable enquiry.

[18 AAC 50.050(a)(2) & 50.055(a)(1), 1/18/97]

24. The Permittee shall comply with the requirements of condition 34.

[18 AAC 50.055(b)(1), 1/18/97]

25. The Permittee shall report in the operating report required by condition 50 if a source listed in this Section because of actual emissions less than the thresholds of 18 AAC 50.335(r) has actual emissions greater than any of those thresholds.

[18 AAC 50.055(c), 1/18/97]

26. No other monitoring, recordkeeping, or reporting is required.

[18 AAC 50.350(m)(3), 6/21/98]

Section 8. Generally Applicable Requirements

27. Asbestos NESHAP. The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152, Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3) & 50.350(d)(1), 1/18/97]
[40 C.F.R. 61, Subparts A & M, and Appendix A, 12/19/96]

28. Refrigerant Recycling and Disposal. The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d) & 50.350(d)(1), 1/18/97]
[40 C.F.R. 82, Subpart F, 7/1/97]

29. Good Air Pollution Control Practice.

29.1 The Permittee shall do the following for sources 1 and 2:

a. Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

b. Keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format;

c. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.030, 5/03/02]
[18 AAC 50.350(f)(2) & (3), 1/18/97]

30. Dilution. The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

31. Bulk Materials Handling, Construction and Industrial Activities. A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or a construction project shall take reasonable precautions to prevent particulate matter (PM) from being emitted into the ambient air.

[18 AAC 50.045(d) & 50.350(d)(1), 1/18/97]

31.1 The Permittee shall keep records of

a. Complaints received by the Permittee and complaints received by the department and conveyed to the Permittee; and

b. Any additional precautions that are taken

(i) To address complaints described in condition 31.1a or to address the results of department inspections that found potential problems; and

(ii) To prevent future dust problems

31.2 The Permittee shall report according to condition 34.

[18 AAC 50.350(g) – (i), 1/18/97]

32. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the department.

[18 AAC 50.055(g), 1/18/97]

33. Open Burning. The Permittee shall comply with the following requirements when conducting open burning at the facility.

33.1 Open burning of asphalt, rubber products, plastics, tars, oils, oily wastes, contaminated oil cleanup materials, or other materials in a way that gives off black smoke is prohibited without written approval of the department in accordance with the procedures set forth in 18 AAC 50.065.

[18 AAC 50.065(b) & 50.350(d)(1), 1/18/97]

33.2 Open burning or incineration of pesticides, halogenated organic compounds, cyanic compounds, or polyurethane products in a way that gives off toxic or acidic gases or particulate matter is prohibited.

[18 AAC 50.065(c) & 50.350(d)(1), 1/18/97]

33.3 Open burning of putrescible garbage, animal carcasses, or petroleum-based materials, including materials contaminated with petroleum or petroleum derivatives, is prohibited if it causes odor or black smoke that has an adverse effect on nearby persons or property.

[18 AAC 50.065(d) & 50.350(d)(1), 1/18/97]

33.4 Open burning is prohibited in an area if the department declares an air quality advisory under 18 AAC 50.245, stating that open burning is not permitted in that area for the day.

[18 AAC 50.065(e) & 50.350(d)(1), 1/18/97]

33.5 When conducting open burning, ensure that:

[18 AAC 50.065(a), 50.350(d)(1) & 50.335(g) – (h), 1/18/97]

a. the material is kept as dry as possible through the use of cover or dry storage;

b. before igniting the burn, noncombustibles are separated to the greatest extent practicable;

c. natural or artificially induced draft is present;

d. to the greatest extent practicable, combustibles are separated from grass or peat layer;

e. combustibles are not allowed to smolder; and

f. sufficient written records are kept to demonstrate that the Permittee complies with the limitations in this condition. Upon request of the department, submit copies of the records.

34. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72]
[18 AAC 50.350(d)(1), 1/18/97]

35. Monitoring, Record Keeping, and Reporting for Air Pollution Prohibited

35.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 49.

[18 AAC 50.350(g), 1/18/97]

35.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 34.

[18 AAC 50.350(h), 1/18/97]

35.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. After an investigation because of a complaint or other reason, the Permittee believes that emissions from the facility have caused or are causing a violation of condition 34.

b. The department notifies the Permittee that it has found a violation of condition 34.

35.4 The Permittee shall keep records of

a. The date, time, and nature of all emissions complaints received;

b. The name of the person or persons who complained, if known;

c. A summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 34; and

d. Any corrective actions taken or planned for complaints attributable to emissions from this facility.

35.5 With each facility operating report under condition 50, the Permittee shall include a brief summary report which must include

a. The number of complaints received;

b. The number of times the Permittee or the department found corrective action necessary;

c. The number of times action was taken on a complaint within 24 hours; and

d. The status of corrective actions the Permittee or the department found necessary that were not taken within 24 hours.

35.6 The Permittee shall notify the department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.240(c), 1/18/97]
[18 AAC 50.350(i), 1/18/97]

36. Permit Renewal. To renew this permit, the Permittee shall submit a complete application under 18 AAC 50.335 no sooner than March 23, 2006 and no later than March 23, 2007 to renew this permit**.**

[18 AAC 50.335(a), 1/18/97]

Section 9. General Source Testing and Monitoring Requirements

37. Requested Source Tests. In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a) & 50.345(a)(10), 1/18/97]

38. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b) & 50.350(g), 1/18/97]

38.1 at a point or points that characterize the actual discharge into the ambient air; and

38.2 at the maximum rated burning or operating capacity of the source or another rate determined by the department to characterize the actual discharge into the ambient air.

39. Reference Test Methods. The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

39.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.040(a), 8/15/02]
[18 AAC 50.220(c)(1)(A) & 50.350(g), 1/18/97]
[40 C.F.R. 60, 7/1/01]

39.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 8/15/02; 50.220(c)(1)(B) & 50.350(g), 1/18/97]
[40 C.F.R. 61, 7/1/01]

39.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 8/15/02]
[18 AAC 50.220(c)(1)(C) & 50.350(g), 1/18/97]
[40 C.F.R. 63, 7/1/01]

39.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Section 14.

[18 AAC 50.030, 5/03/02]
[18 AAC 50.220(c)(1)(D) & 50.350(g), 1/18/97]

39.5 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(4), 8/15/02]
[18 AAC 50.220(c)(1)(E) & 50.350(g), 1/18/97]
[40 C.F.R. 60, Appendix A, 7/1/01]

39.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Method 201.

[`18 AAC 50.035(b)(2), 8/15/02]
[18 AAC 50.220(c)(1)(F) & 50.350(g), 1/18/97]
[40 C.F.R. 51, Appendix M, 7/1/01]

39.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(19), 8/15/02]
[18 AAC 50.220(c)(2) & 50.350(g), 1/18/97]
[40 C.F.R. 63, Appendix A, Method 301, 7/1/01]

40. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions[4]

[18 AAC 50.220(c)(3), 50.350(g) & 50.990(88), 1/18/97]

41. Test Plans. Except as provided in condition 17, before conducting any source tests, the Permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the source will operate during the test and how the Permittee will document this operation. A complete plan must be submitted within 60 days of receiving a request under condition 37 and at least 30 days before the scheduled date of any tests.

[18 AAC 50.345(a)(10), 50.350(b)(3), & 50.350(g), 1/18/97]

42. Test Notification. Except as provided in condition 17, at least ten days before conducting a source test, the Permittee shall give the department written notice of the date and time the source test will begin.

[18 AAC 50.345(a)(10)(C) & 50.350(b)(3), 1/18/97]

43. Test Reports. Except as provided in condition 17, within 45 days after completing a source test, the Permittee shall submit two copies of the results, to the extent practical, in the format set out in the *Source Test Report Outline* of Volume III, Section IV.3 of the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030(8). The Permittee shall certify the results as set out in condition 45.

[18 AAC 50.345(a)(10)(D), 50.350(b)(3) & 50.350(h) – (i), 1/18/97]

[4] *Standard conditions* means dry gas at 70° F and an absolute pressure of 760 millimeters of mercury, as defined in 18 AAC 50.990(88) effective 7/2/00.

44. Particulate Matter (PM) Calculations. In source testing for compliance with the PM standards in condition 4, the three-hour average is determined using the average of three one-hour test runs

Section 10. General Recordkeeping, Reporting, and Compliance Certification Requirements

45. Certification. The Permittee shall certify all reports, compliance certifications, or other documents submitted to the department under this permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. When certifying a compliance certification, the official's signature must be notarized.

[18 AAC 50.205, 50.345(a)(9), 50.350(b)(3), & 50.350(i) 1/18/97]

46. Submittals. Unless otherwise directed by the department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.350(i), 1/18/97]

47. Information Requests. The Permittee shall furnish to the department, within a reasonable time, any information the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the department copies of records required by this permit. The department, in its discretion, will require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200, 50.345(a)(8), 50.350(b)(3), & 50.350(g) – (i), 1/18/97]

48. Recordkeeping Requirements. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

[18 ACC 50.350(h), 1/18/97]

48.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

48.2 records of all monitoring required by this permit, and information about the monitoring including:

a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

b. sampling dates and times of sampling or measurements;

c. the operating conditions that existed at the time of sampling or measurement;

d. the date analyses were performed;

e. the location where samples were taken;

f. the company or entity that performed the sampling and analyses;

g. the analytical techniques or methods used in the analyses; and

h. the results of the analyses.

49. Excess Emission and Permit Deviation Reports.

49.1 Except as provided in condition 34, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. In accordance with 18 AAC 50.240(c) , as soon as possible after the event commences or is discovered, report

(i) Emissions that present a potential threat to human health or safety; and

(ii) Excess emissions that the Permittee believes to be unavoidable;

b. In accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;

c. Report all other excess emissions and permit deviations

(i) Within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in conditions 49.1c(ii) and 49.1c(iii).

(ii) If a continuous or recurring excess emission is not corrected within 48 hours of discovery, within 72 hours of discovery unless the department provides written permission to report under condition 49.1c(i); and

(iii) For failure to monitor, as required in other applicable conditions of this permit.

49.2 When reporting excess emissions, the Permittee must report using either the department's online form, which can be found at http://www.dec.state.ak.us/awq/excess/report.asp, or, if the Permittee prefers, the form contained in Section 16 of this permit. The Permittee must provide all the information called for by the form that is used.

49.3 When reporting a permit deviation, the Permittee must report using the form contained in Section 16 of this permit. The Permittee must provide all information called for by the form.

49.4 If requested by the department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 50.240(c), & 50.350(i), 1/18/97]

50. Operating Reports. During the life of this permit, the Permittee shall submit an original and two copies of an operating report by December 31 for the period December 1 of the previous year to November 30 of the current year.

50.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

50.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 49, either

a. The Permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) a description of the excess emissions or permit deviation; and

(v) any corrective action or preventive measures taken and the date or dates of such actions; or

b. when excess emissions or permit deviations have already been reported under condition 49, the Permittee may cite the date or dates of those reports.

50.3 The operating report must include a listing of emissions monitored under conditions 60.1 or 60.2 which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report

a. The date of the emissions;

b. The equipment involved;

c. The permit condition affected; and

d. The monitoring result which triggered the additional monitoring.

[18 AAC 50.350(d)(4), (f)(3) & (i), 1/18/97]

51. Annual Compliance Certification. Each year by February 1, the Permittee shall compile and submit to the department an original and two copies of an annual compliance certification report as follows:

51.1 For each permit term and condition set forth in Section 3 through Section 10, including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 1/18/97]

a. certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;

b. state whether compliance is intermittent or continuous; and

c. briefly describe each method used to determine the compliance status.

51.2 Submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.350(j), 1/18/97]

Section 11. Standard Conditions Not Otherwise Included in the Permit

52. Credible Evidence. Consistent with Alaska law, for purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any standard in this permit, nothing in this permit precludes the use of any credible evidence or information relevant to whether the facility would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. If this condition applies to an NSPS source, then the requirements of 40 C.F.R. 60.11(g) as adopted in 18 AAC 50.040(a)(1) also apply.

[18 AAC 50.350(f)(3), 1/18/97]

53. The Permittee must comply with each permit term and condition. Noncompliance constitutes a violation of AS 46.14, 18 AAC 50, and the Clean Air Act, except for those requirements designated as not federally-enforceable, and is grounds for:

53.1 an enforcement action;

53.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

53.3 denial of an operating-permit renewal application.

[18 AAC 50.345(a)(1) & 50.350(b)(3), 1/18/97]

54. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.345(a)(2) & 50.350(b)(3), 1/18/97]

55. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit.

[18 AAC 50.345(a)(3) & 50.350(b)(3), 1/18/97]

56. Compliance with permit terms and conditions is considered to be compliance with those requirements that are:

56.1 included and specifically identified in the permit; or

56.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.345(a)(4) & 50.350(b)(3), 1/18/97]

57. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any operating permit condition.

[18 AAC 50.345(a)(5) & 50.350(b)(3), 1/18/97]

58. The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.345(a)(6) & 50.350(b)(3), 1/18/97]

59. The Permittee shall allow an officer or employee of the department or an inspector authorized by the department, upon presentation of credentials and at reasonable times with the consent of the owner or operator, to:

59.1 enter upon the premises where a source subject to the operating permit is located or where records required by the permit are kept,

59.2 have access to and copy any records required by the permit,

59.3 inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit, and

59.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.345(a)(7) & 50.350(b)(3), 1/18/97]

Section 12. Fugitive Dust and VOC Control Plan

Soil Treatment Plant

The soil treatment plant is fully enclosed. It is covered with a freestanding dome shaped tent liner with an approximate size of 100 by 200 feet. The enclosure provides optimal control for fugitive dust. Openings are provided for the dryer exhaust stack and the treated soil discharge pipe. During full operation an opening will also be provided for a front end loader to enter the tent in order to load untreated soil onto the feeder. The feed hopper is covered with a bar screen to segregate oversized materials. A short conveyor transports the soil to the rotary drum inlet. The drum dryer is fired with natural gas and the heated air is routed counter current to the material flow. The exhaust air is withdrawn near the material inlet and routed to a positive pressure baghouse. After the baghouse, the exhaust is heated in the afterburner to specification temperature determined by source test. Automatic dryer air temperature controls and a CO-monitor are provided. A source test showed that the plant met the CO limits specified in the regulations. Compliance with the fugitive dust emission limits is achieved for the materials handling equipment inside the shelter by observance of no visible emissions from the shelter openings during operations. Compliance with the CO limits indicates that VOC concentrations in the exhaust are minimal. There are no other VOC emission sources at the soil treatment facility, such as organic liquid storage tanks, sumps or scrubber water effluent ponds.

Treated Soil Discharge

The treated soil exits the plant through a horizontal pipe which makes a 90 degree bend and ends as a vertical discharge chute. The vertical pipe has a protective canvas cover, which reduces the discharge height to near ground level. This provides an effective control method for fugitive dust.

Treated Soil Stockpiles

The treated soils are removed from the discharge pile by front end loader and placed on segregated stockpiles at the southwest corner of the facility pad. The stockpiles are kept small (< 150 tons) and will be picked up by the owner and returned and backfilled at their origination point. The level of fines in the treated soil is very low. It can be expected that a portion of the fines are picked up by the dryer airflow firing the incineration/drying process and subsequently filtered out and retained with the baghouse bottom ash. No fugitive dust emissions were observed in the past from the stockpiles.

Untreated Soil Stockpiles

The location of the untreated soil stockpile is wind sheltered between the shop and batch plant buildings, the block plant and soil remediation tents. The stockpile will be kept at a minimal size (25 x 100 feet) and will be covered with a 10-mil HDPE liner. The cover will provide effective fugitive dust control.

Section 13. Visible Emissions and PM Monitoring, Recordkeeping and Reporting

60. Visible Emissions Monitoring. The Permittee shall observe the exhaust of Source ID 1, the soil remediation unit, for visible emissions using **either** the Method-9 Plan under condition 60.1 **or** the Smoke/No-Smoke Plan under condition 60.2. The Permittee may change visible-emission plans for a source at any time **unless prohibited from doing so by condition 60.3.**

{18 AAC 50.350(g), 1/18/97]

60.1 **Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

a. First Method 9 Observation. Observe exhaust for 18 minutes within six months after the issue date of this permit or within 14 calendar days after changing from the Smoke/No Smoke Plan of condition 60.2 whichever is later.

b. Monthly Method 9 Observations. After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that a source operates.

c. Semiannual Method 9 Observations. After observing emissions for three consecutive operating months under condition 60.1, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, observe emissions at least semiannually for 18 minutes.

Semiannual observations must be taken between four and seven months after the previous set of observations.

d. Annual Method 9 Observations. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, observe emissions at least annually.

Annual observations must be taken between 10 and 13 months after the previous observations and must include at least three 18-minute sets of observations.

e. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that source to at least monthly intervals, until the criteria in condition 60.1c for semiannual monitoring are met.

60.2 **Smoke/No Smoke Plan[5].** Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that a source operates.

b. Reduced Monitoring Frequency**.** After the source has been observed on 30 consecutive operating days, if the source operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that a source operates.

c. Smoke Observed. If smoke is observed, either begin the Method 9 Plan of condition 60.1 or perform the corrective action required under condition 60.3.

60.3 **Corrective Actions Based on Smoke/No Smoke Observations.** If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of condition 60.2, then the Permittee shall either follow the Method 9 Plan of condition 60.1 or

a. Initiate actions to eliminate smoke from the source within 24 hours of the observation;

b. Keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and

c. After completing the actions required under condition 60.3a,

(i) Take Smoke/No Smoke observations in accordance with condition 60.2

(A) At least once per day for the next seven operating days and until the initial 30 day observation is completed; and

(B) Continue as described in condition 60.2b; or

(ii) If the actions taken under condition 60.3a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of condition 60.2, then observe the exhaust using the Method 9 Plan unless the department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under condition 60.2.

61. Visible Emissions Record Keeping - The Permittee shall keep records in accordance with this condition 61.

[18 AAC 50.350(h), 1/18/97]

[5] The Permittee is not required to comply with conditions 41, 42 and 43 (Test Plans, Test Notifications and Test Reports) when the exhaust is observed for visible emissions under the Smoke/No Smoke Plan described in condition 60.2.

61.1 If using the Method 9 Plan of condition 60.1,

a. The observer shall record

(i) The name of the facility, emissions source and location, facility type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in Section 14;

(ii) The time, estimated distance to the emissions location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;

(iii) The presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;

(iv) Opacity observations to the nearest five percent at 15 second intervals on the Visible Emissions Observation Record in Section 14; and

(v) The minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period;

b. To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet.

c. Calculate and record the highest 18-consecutive-minute average observed.

61.2 If using the Smoke/No Smoke Plan of condition 60.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the department:

a. the date and time of the observation;

b. from Table 1 of this permit, the ID of the source observed;

c. whether visible emissions are present or absent in the exhaust;

d. a description of the background to the exhaust during the observation;

e. if the source starts operation on the day of the observation, the startup time of the source; and

f. name and title of the person making the observation; and

g. operating rate (load or fuel consumption rate).

62. Visible Emissions Reporting. The Permittee shall report visible emissions as follows:

[18 AAC 50.350(i), 1/18/97]

62.1 Include in each facility operating report under condition 50:

a. Which visible emissions plan of condition 60 was used for each source; if more than one plan was used, give the time periods covered by each plan;

b. for each source under the Method 9 Plan,

(i) copies of the observation results (i.e. opacity observations) for each source that used the Method 9 Plan, except for the observations the Permittee has already supplied to the department; and

(ii) a summary to include:

(A) number of days observations were made;

(B) highest six-minute average observed; and

(C) dates when one or more observed six-minute averages were greater than 20 percent;

c. for each source under the Smoke/No Smoke Plan, the number of days that Smoke/No Smoke observations were made and which days, if any, that smoke was observed; and

d. a summary of any monitoring or record keeping required under conditions 60.1 and 60.2 that was not done;

62.2 report under condition 49:

a. the results of Method 9 observations that exceed an average 20 percent for any six-minute period; and

b. if any monitoring under condition 60 was not performed when required, report within three days of the date the monitoring was required.

63. Particulate Matter (PM) Monitoring. The Permittee shall conduct source tests on Source ID(s) 1 and 2 to determine the concentration of particulate matter (PM) in the exhaust in accordance with this condition 63.

[18 AAC 50.350(g), 1/18/97]

63.1 Within six months of exceeding the criteria of condition 63.2a or 63.2b, either

a. Conduct a PM source test according to conditions 17 and Section 9; or

b. Make repairs so that emissions no longer exceed the criteria of condition 63.2; to show that emissions are below those criteria, observe emissions as described in condition 60.1 under load conditions comparable to those when the criteria were exceeded.

63.2 Conduct the test according to condition 63.1 if

a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or

b. for a source with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the department has waived this requirement in writing.

63.3 During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.

63.4 The automatic PM source test requirement in condition 63.1 and 63.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

[18 AAC 50.350(g)-(i), 1/18/97]

64. Particulate Matter Record Keeping. Within 180 calendar days after the effective date of this permit, the Permittee shall record the exhaust stack diameter of each Source ID(s) 1 and 2. Report the stack diameter(s) in the next operating report under condition 50.

[18 AAC 50.350(h), 1/18/97]

65. Particulate Matter Reporting. The Permittee shall report as follows:

[18 AAC 50.350(i), 1/18/97]

65.1 Report under condition 49

a. the results of any PM source test that exceeds the PM emissions limit; or

b. if one of the criteria of condition 63.2 was exceeded and the Permittee did not comply with either condition 63.1a or 63.1b, this must be reported by the day following the day compliance with condition 63.1 was required;

65.2 Report observations in excess of the threshold of condition 63.2b within 30 days of the end of the month in which the observations occur;

65.3 In each facility operating report under condition 50, include

a. The dates, source IDs, and results when an observed 18-minute average was greater than an applicable threshold in condition 63.2;

b. A summary of the results of any PM testing under condition 63; and

c. Copies of any visible emissions observation results (opacity observations) greater than the thresholds of condition 63.2 if they were not already submitted.

66. With regard to Source ID #2, the gas fired backup diesel generator, the visible emissions and particulate matter emissions monitoring in condition 60 through condition 65 do not apply until annual operations of Source ID #2 exceed 400 hours per calendar year on liquid fuel.

66.1 For Source ID #2 the Permittee shall record on a monthly basis the cumulative total for the calendar year of the hours the source was:

a. not in operation; or

b. operated on gaseous fuel; or

c. operated on liquid fuel.

66.2 The Permittee shall report the hours recorded in condition 66.1 in the operating report required under condition 50.

66.3 The Permittee shall notify the department and begin monitoring according to conditions 60 through 65 no later than 15 days after the end of a calendar month in which the cumulative hours of Source ID #2 operating on liquid fuel exceed 400 hours for the calendar year.

Section 14. Visible Emission Evaluation Procedures

An observer qualified according to 40 C.F.R. 60, RM 9 (Method-9) shall use the following procedures to determine the reduction of visibility through the exhaust effluent.

Position. The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction and, when observing opacity of emissions from rectangular outlets (e.g., roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case the observer should make his observations with his line of sight perpendicular to the longer axis of such a set of multiple stacks (e.g., stub stacks on baghouses).

Field Records. The observer shall record the name of the plant, emission location, facility type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet. The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on the sheet at the time opacity readings are initiated and completed.

Observations. Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. The observer shall not look continuously at the plume but instead shall observe the plume momentarily at 15-second intervals. Unless directed to do otherwise in this permit, observe emissions for 60 consecutive minutes to obtain a minimum of 240 observations.

Attached Steam Plumes. When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

Detached Steam Plume. When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume.

Recording Observations. Opacity observations shall be recorded to the nearest 5 percent at 15-second intervals on the Visible Emissions Observation Record contained in this section. Record the minimum number of observations required by the permit. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

Data Analysis. To determine compliance with a standard set out in conditions 3 and 23, count the number of observations that exceed 20 percent opacity and record this number on the sheet.

Data Reduction. To determine the six-minute average, divide the observations recorded on the record sheet into sets of 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. If an applicable standard specifies an averaging time requiring more than 24 observations, calculate the average for all observations made during the specified time period. Record the average opacity on the sheet.

Visible Emissions Field Data Sheet

Certified Observer: _____

Company: _____

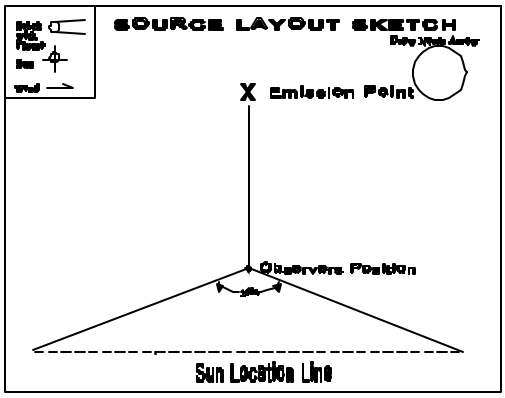
Location: _____

Test No.: _____ Date: _____

Source: _____

Production Rate, Operating Rate & Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description: Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Visible Emissions Observation Record

Page ___ of ___

Company _____ Certified Observer_____

Test Number _____ Clock time_____

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____
Observer Signature

Data Reduction:
Duration of Observation Period (minutes) _____
Number of Observations _____
Number of Observations exceeding 20% _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 15. SO_2 Material Balance Calculation

If a fuel shipment contains more than 0.75 percent sulfur by weight, calculate the three-hour exhaust concentration of SO_2 using the following equations:

A = 31,200 X [**wt%S_{fuel}**] = 31,200 X _____ = _____

B = 0.148 X [**wt%S_{fuel}**] = 0.148 X _____ = _____

C = 0.396 X [**wt%C_{fuel}**] = 0.396 X _____ = _____

D = 0.933 X [**wt%H_{fuel}**] = 0.933 X _____ = _____

E = B + C + D = _____ + _____ + _____ = _____

F = 20.9 – [**vol%$_{dry}O_{2,\ exhaust}$**] = 20.9 - _____ = _____

G = [**vol%$_{dry}O_{2,\ exhaust}$**] ÷ F = _____ ÷ _____ = _____

H = 1 + G = 1 + _____ = _____

I = E x H = _____ x _____ = _____

SO_2 concentration = A ÷ I = _____ ÷ _____ = _____ PPM

The **wt%S_{fuel}**, **wt%C_{fuel}**, and **wt%H_{fuel}** are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to condition 5.1. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%$_{dry}O_{2,\ exhaust}$**) is obtained from oxygen meters, manufacturer's data, or from the most recent analysis under 40 C.F.R. 60, Appendix A-2, Method 3, adopted by reference in 18 AAC 50.040(a). at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%S_{fuel}** = 1.0%, then enter 1.0 into the equations not 0.01 and if **vol%$_{dry}O_{2,\ exhaust}$** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.350(g), 1/18/97]

Section 16. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

Alaska Interstate Construction LLC _____
Company Name

Deadhorse Soil Remediation Unit. _____
Facility Name

Reason for notification:

❑ **Excess Emissions** — *If you checked this box Fill out section 1*

❑ **Other Deviation from Permit Condition** — *If you checked this box fill out section 2*

When did you discover the Excess Emissions or Other Deviation:
Date:__/__/__ Time:__:__

Section 1. Excess Emissions

(a) Event Information (Use 24-hour clock)**:**

	START Time**:** (hr:min):	**END** Time:	**Duration**
Date: _____	_____:_____	_____:_____	_____:_____
Date: _____	_____:_____	_____:_____	_____:_____
		Total:	_____:_____

(b) Cause of Event (Check all that apply)**:**

❑ START UP ❑ UPSET CONDITION ❑ CONTROL EQUIPMENT
❑ SHUT DOWN ❑ SCHEDULED MAINTENANCE ❑ OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

(c) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device

(d) Emission Limit Potentially Exceeded

Identify each emission standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.

Permit Condition	Limit	Emissions Observed

(e) Excess Emission Reduction:

Attach a description of the measures taken to minimize and/or control emissions during the event.

(f) Corrective Actions:

Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.

(g) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?

❑ YES ❑ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235?

❑ YES ❑ NO

Section 2. Other Permit Deviations

(a) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device

(b) Permit Condition Deviation:

Identify each permit condition deviation or potential deviation. Attach additional sheets as necessary.

Permit Condition	Potential Deviation

(c) Corrective Actions:

Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name:

Signature: Date

Alaska Department of Environmental Conservation

Air Permits Program

September 24, 2002

Admin Revision 1, May 23, 2003

Alaska Interstate Construction LLC

Deadhorse Soil Remediation Unit.

STATEMENT OF LEGAL AND FACTUAL BASIS

of the terms and conditions for

Permit No. 244TVP01

Prepared by Don Bodron

Revised by Don Bodron

INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of Operating Permit No. 244TVP01.

FACILITY IDENTIFICATION

Section 1 of Operating Permit No. 244TVP01 contains information on the facility as provided in the Title V permit application.

The facility is owned and operated by **Alaska Interstate Construction, LLC**, and **Alaska Interstate Construction LLC** is the Permittee for the facility's operating permit. The SIC codes for this facility are 4953 and 4959.

The facility consists of a soil remediation unit with a rated capacity of 25 tons per hour. The fuels consumed are natural gas and/or #2 diesel fuel with a maximum sulfur content of 0.5%. At the current location in Deadhorse, Alaska, the SRU is fueled by natural gas. The SRU has an attached baghouse as a control device to comply with the particulate matter standard. In addition there is a 350 kW backup generator located at the Deadhorse facility. It is only used when power from the local utility is offline. The unit is normally fueled by natural gas, however, if the local power and natural gas are both offline, Alaska Interstate Construction will burn #2 diesel fuel in the engine.

SOURCE INVENTORY AND DESCRIPTION

Table 1 of Operating Permit No. 244TVP01 contains information on the sources regulated by this permit as provided in the application. The table is provided for informational and identification purposes only. Specifically, the source rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

Section 2 of Operating Permit No. 244TVP01 contains emission information as provided in the Title V application. A summary of the potential to emit (PTE)[6] and assessable PTE as indicated in the application from the **Deadhorse Soil Remediation Unit.** is shown in the following table.

[6] *Potential to Emit or PTE* means the maximum quantity of a release of an air contaminant, considering a facility's physical or operational design, based on continual operation of all sources with the facility for 24 hours a day, 365 days a year, reduced by the effect of pollution control equipment and approved state or federal limitations on the capacity of the facility's sources or the facility to emit an air contaminant, including the limitations such a restrictions on hours of rate of operation and type or amount of material combusted, stored, or processed...as defined in AS 46.14.990(21), effective 1/18/97.

Table A - Emissions Summary, in Tons Per Year (TPY)

Pollutant	NO_X	CO	PM-10	SO_2	VOC	HAPs	Total
PTE	107	24.6	13.5	162.8	6.2	0	314.1
Assessable PTE	107	24.6	13.5	162.8	0	0	307.9

The assessable PTE listed under condition 1 is the sum of the emissions of each individual regulated air contaminant for which the facility has the potential to emit quantities greater than 10 TPY.

For criteria pollutants, emissions are as provided in the application. Facility emissions calculations were made with the following assumptions: All emission rates were at full load conditions. Potential to Emit (PTE) calculations for the SRU were made based on the rated consumption of #2 diesel oil and an assumed petroleum distillates percentage of 2%. PTE calculations for the SRU and the backup generator were made based on 8760 hours per year each. PTE calculations for the backup generator were done with #2 diesel fuel. Emission factors were taken from AP-42 or by mass balance.

BASIS FOR REQUIRING AN OPERATING PERMIT

Section 2 of Operating Permit No. 244TVP01 lists the regulatory classifications of the **Deadhorse Soil Remediation Unit..**

Alaska regulations require operating permit applications to include identification of "regulated sources." As applied to **Deadhorse Soil Remediation Unit.**, the state regulations require a description of:

⇒ Each incinerator, including a demonstration showing each requirement in 18 AAC 50.050, Incinerator Emissions Standards, that applies, under 18 AAC 50.335(e)(4)(A);

⇒ Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment, under18 AAC 50.335(e)(4)(C);

⇒ Each source subject to a standard adopted by reference in 18 AAC 50.040 under 18 AAC 50.335(e)(2); and

⇒ Sources subject to requirements in an existing department permit 18 AAC 50.335(e)(5).

The emission sources at **Deadhorse Soil Remediation Unit.** classified as "regulated sources" according to the above department regulations are listed in Table 1 of Operating Permit No. 244TVP01.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

The most recent permit issued for this facility is permit-to-operate number 9740-AA001. This permit-to-operate includes all construction authorizations issued through January 14, 1997, since it was issued before January 18, 1997. All facility-specific requirements established in this previous permit are included in the new operating permit as described in Table C.

Construction Permits

No construction permits have been issued for this facility after January 18, 1997 (the effective date of the new divided operating and construction-permitting program).

Title V Operating Permit Application History

The owner or operator submitted an application on December 5, 1997. A second application was submitted on January 3, 2002.

COMPLIANCE HISTORY

The facility has operated at its current location since 1991. Review of the permit files for this facility, indicates a facility generally operating in compliance with its operating permit. department records do not contain any inspection reports for this facility. Receipt and review of operating reports required by prior permits indicate paperwork violations (late reports, missing information). Follow up has resulted in receipt of the missing information.

FACILITY-SPECIFIC REQUIREMENTS CARRIED FORWARD

State of Alaska regulations in 18 AAC 50.350(d)(1)(D) require that an operating permit include each facility-specific requirement established in a prior permit issued under former 18 AAC 50.400. Table C below lists the prior operating permit condition that established a requirement in Permit to Operate No. 9740-AA001 and the new condition in Operating Permit No. 244TVP01 that carries the old requirement into the new permit.

Table C - Comparison of Pre-January 18, 1997 Permit No. 9740-AA001 Conditions to Operating Permit No. 244TVP01 Conditions [7]

Permit No. 9740-AA001 Condition number	**Description of Requirement**	**Permit No.** 244TVP01 **Condition Number**	**How condition was revised**
1	Compliance with state ambient air quality standards	Not applicable	Only applies to construction permits
2	Compliance with most stringent standards	Not applicable	Only applies to construction permits
3	Authorizes remediation of specific contaminants	Condition 6	Same information and format
4	Manner of operation of process equipment	Condition 8	Same information; slightly different format
5	Fuel sulfur content requirement	Condition 5	Same requirement; different format
6	CO and Oxygen exhaust stack requirements	Condition 9	Same information; same format
7	Pre and post heat requirements for secondary combustion chamber	Condition 10	Same requirement; same format
8	Operation at proper capacity	Condition 11	Same requirement; same format
9	Maintaining proper baghouse pressure drop	Condition 12	Same requirement; same format
10	Fugitive dust requirements	Conditions 13 and 31 And Section 12	Same requirements; different format
11	Replacement bags	Condition 14	Same requirement; same format

[7] This table does not include all standard and general conditions

Permit No. 9740-AA001 Condition number	**Description of Requirement**	**Permit No.** 244TVP01 **Condition Number**	**How condition was revised**
	for baghouse		
12	Need for CS Approved Work Plan	Condition 15	Same requirement; same format
13	Modification Requirements	Condition 16	Same requirement, same format
14	Source Testing Requirements	Condition 17 and Section 9	Specific source testing requirements merged with general requirements
15	Source Testing from deterioration	Condition 18	Same requirement, same format
16	CEMS installation requirements	Condition 19	Same requirement, same format
17	CEMS certification report requirements	Condition 20	Same requirement, same format
18	Control device pressure drop	Condition 21	Same requirement, same format
19	Excess Emissions reporting	Condition 49 and Section 16	Updated requirements to current standards
20	CEM malfunctions	Condition 22	Same requirements, slightly different format
21	Facility access	Condition 59	Same requirements, updated format

LEGAL AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in Operating Permit No. **244TVP01**.

Conditions 1 and 2, Fee Requirements

Applicability: The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These standard conditions require the Permittee to pay fees in accordance with the department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air contaminant authorized by the permit (AS 46.14.250(h)(1)(A)). Air contaminant means any regulated air contaminant and any hazardous air contaminant. Therefore, assessable emissions under AS 46.14.250(h)(1)(A) means the **potential** to emit any air contaminant identified in the permit, including those not specifically limited by the permit. For example, hydrogen chloride (HCl) emissions from an incinerator are assessable emissions because they are a hazardous air contaminant, even if there is currently no emission limit on HCl for that class of incinerator.

The conditions also describe how the Permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air contaminant. Therefore, fees based on actual emissions must also be paid on any contaminant emitted whether or not the permit contains any limitation of that contaminant.

This standard condition specifies that, unless otherwise approved by the department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The Permittee will normally pay for actual emissions – just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the facility, such as changes in equipment or an emission rate from existing equipment.

If the Permittee does not choose to annually calculate assessable emissions, emissions fees will be based on “potential to emit” (PTE).

The PTE set forth in the condition is based on 0.5% by weight sulfur content. If the actual sulfur content of the fuel is greater than these assumptions, the assessable emissions calculations provided by the Permittee should reflect the actual sulfur content.

Condition 3 and Section 13, Visible Emissions Standard

Applicability: The visible emission standard applies to all industrial processes and the operation of all fuel-burning equipment in Alaska. Source ID(s) 1 and 2 are fuel-burning equipment and Source ID 1 contains an industrial process. Source ID 2, however, is not

subject to monitoring under this standard until such time as the hours of operation of Source ID 2 on liquid diesel fuel exceed 400 hours in a calendar year. See condition 66 discussion.

Factual basis: The condition cites the state visible emission standard applicable to industrial processes and fuel burning equipment. The department will use this standard condition in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50. The Permittee shall not cause or allow the equipment to violate this standard.

State air quality regulations adopted effective May 3, 2002, allow for an average six-minute opacity observation. The existing regulation, limiting opacity to no more than 20% for more than three minutes in any one hour, is included because EPA Region X has not formally approved the changed opacity regulation as part of Alaska's State Implementation Plan (SIP).

The monitoring, recordkeeping, and reporting (MR&R) requirements for the visible emission standards are set forth in Section 13 of this permit. (Section 13 also contains MR&R requirements for condition 4.)

Monitoring - There are two options for monitoring visible emissions. One option (Method-9 Plan) requires the Permittee to observe visible emissions in accordance with the state reference test method (i.e. 40 CFR 60, Method 9). The other option (Smoke/No Smoke Plan) requires the Permittee to momentarily observe the exhaust for presence or absence of smoke (visible emissions). This latter option takes into account the difficulty and expense of getting certified readers to remote locations in Alaska.

Corrective actions (condition 60.3): If, under the Smoke/No Smoke Plan, the Permittee observes visible emission in the exhaust, the Permittee **may** switch to the Method-9 Plan. Otherwise the Permittee **must** take action to eliminate visible emissions from the source within 24 hours of the observation. After completing the action, the Permittee must continue to observe the exhaust for the presence or absence of visible emissions for 30 operating days. If visible emissions are observed during this 30-day period, the Permittee **must** switch to the Method-9 Plan within seven days after visible emissions are observed.

Recordkeeping - The Permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

Reporting - The Permittee is required to report emissions in excess of the state visible emissions standard and deviations from permit conditions. The Permittee is required to include copies of the results of all Method 9 observations with the facility operating report.

Condition 4 and Section 13, Particulate Matter (PM) Standard

Applicability: The PM standard applies to all industrial processes and the operation of all fuel burning equipment in Alaska. Source ID(s) 1 and 2 are fuel-burning equipment and Source ID 1 contains an industrial process. Source ID 2, however, is not subject to monitoring under this standard until such time as the hours of operation of Source ID 2 on liquid diesel fuel exceed 400 hours in a calendar year. See discussion under condition 66. The SIP standard for PM applies to all fuel-burning equipment because it is contained in the federally approved SIP dated October 1983.

Factual basis: The condition cites the state particulate matter emission standard applicable to industrial processes and fuel-burning equipment. The department will use this standard condition in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50. The condition requires the Permittee to comply with the state PM (also called grain loading) standard applicable to fuel-burning equipment. The Permittee shall not cause or allow fuel-burning equipment to violate this standard.

MR&R requirements are listed in Section 13 of the permit. (Section 13 also contains MR&R requirements for condition 3.)

Recordkeeping - Under condition 64, the Permittee is required to record the exhaust stack diameter of each Source ID(s) 1 and 2 within 180 calendar days after the effective date of this permit.

Reporting - Under condition 65.1, the Permittee is required to include with the first or second facility operating report required by condition 50 copies if the records required under condition 64, and to report as excess emissions under condition 49 of the results of a source test for PM exceeds the PM emission limit stated in condition 4.

Condition 5, Sulfur Compound Emissions

Applicability: The sulfur emission standard in 18 AAC 50.055(c) applies to operation of all industrial processes and fuel-burning equipment in the State of Alaska. Source ID(s) 1 and 2 are fuel-burning equipment and source ID 1 contains an industrial process. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October 1983.

Factual basis: The condition reiterates a sulfur emission standard applicable to industrial processes and fuel burning equipment. The Permittee may not cause or allow their equipment to violate this standard. The department will use this standard condition in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

Monitoring - Monitoring of sulfur dioxide emissions is accomplished by analysis of fuel sulfur content.

Diesel Fuel (Fuel Oil): Fuel Oil sulfur is measured in weight percent sulfur (wt% S). Calculations show that fuel containing no more than 0.5 wt% S will always comply with the emission standard. This is true for all liquid hydrocarbon fuels, even with no excess air. Verification of the ASTM fuel oil grade as No. 1 or No. 2 fuel oil (DF-1 or DF-2) verifies compliance with the standard because these fuel oils always have a fuel sulfur content of no more than 0.5 wt% S. For fuels with a sulfur content higher than 0.5 wt% S, this condition

requires the Permittee to use the equations in Section 15 to calculate the exhaust gas SO_2 concentration, showing whether the standard was exceeded. The equations in Section 15 are all based on stoichiometric mass balance. [8]

Fuel Gas: Fuel gas sulfur is measured as hydrogen sulfide (H_2S) concentration in ppm by volume (ppmv). Calculations [9] show that fuel gas containing no more than 4000 ppm H_2S will always comply with this emission standard. This is true for all fuel gases, even with no excess air.

Equations to calculate the exhaust gas SO_2 concentrations resulting from the combustion of fuel gas are not included in this permit. Fuel gas with an H_2S concentration of even 10 percent of 4000 ppm is currently not available in Alaska and is not projected to be available during the life of this permit.

Recordkeeping - For Diesel fuel the Permittee is required to record the fuel sulfur content or fuel grade of each shipment and all material balance calculations, and for fuel gas, the H_2S concentration of the fuel gas.

Reporting – The Permittee is required to report as "state" excess emissions whenever the fuel combusted causes sulfur compound emissions to exceed the standards in this condition. The Permittee is required to include the material balance calculations for fuel oil in the excess emissions report.

The Permittee is required to include copies of the records mentioned in the previous paragraph with the facility operating report.

Conditions 6 - 22, Permit Conditions Carried Forward

Applicability: These conditions have been carried forward from Air Quality Control Permit No. 9740-AA001.

Factual Basis: These conditions have been carried forward from the previous Air Quality Control Permit Number 9740-AA001 and have been maintained in their original content except for modifications to format for clarification. Monitoring, recordkeeping, and reporting requirements have been added to conditions where these requirements were deficient in the previous permit.

Conditions 23 - 26, Insignificant Sources

Applicability: These general emission standards apply to all industrial processes fuel-burning equipment, and incinerators regardless of size.

Factual basis: Conditions 23 through 25 require the Permittee to comply with the general standards for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The department finds that the insignificant sources at this facility do not need specific monitoring, recordkeeping and reporting to ensure compliance with these conditions.

[8] http://www.state.ak.us/dec/dawq/aqm/newpermit.htm
[9] See ADEC Air Permits Web Site at http://www.state.ak.us/dec/dawq/aqm/newpermit.htm, under "Stoichiometric Mass Balance Calculations of Exhaust Gas SO_2 Concentration.

Condition 23 requires the Permittee to certify that their insignificant sources comply with applicable requirements.

Condition 27, Asbestos NESHAP

Applicability: The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

Factual Basis: The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 28, Refrigerant Recycling and Disposal

Applicability: Applies if the Permittee engages in the recycling or disposal of certain refrigerants.

Factual Basis: The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F, that will apply if the Permittee uses certain refrigerants. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with this federal regulation.

Condition 29, Good Air Pollution Control Practice

Applicability: Applies to all sources.

Factual basis: The condition requires the Permittee to comply with good air pollution control practices for all sources.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. If appropriate maintenance is not applied to the equipment, the department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

For pollution control equipment, the Permittee is not specifically required to follow manufacturer's recommendations. If the manufacturer's recommendations are not suitable for conditions in Alaska, or don't relate to minimizing emissions, the Permittee can require revisions as a condition of purchase for existing equipment. Condition 29, however, does require the Permittee to take into consideration manufacturer's recommendations for control equipment, because the efficient operation of control equipment directly impacts emissions. The department does not anticipate that conditions in Alaska will require maintenance procedures that are radically different than those that are recommended by the manufacturer. If the manufacturers' procedures are not available, then the Permittee is required to comply

with a specific operation and maintenance (O & M) plan for control equipment as approved by the department.

Condition 29 requires the Permittee to keep maintenance records if the maintenance would have a significant effect on emissions. The records must be made available to the department on demand. The department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

Condition 30, Dilution

Applicability: This state regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

Factual Basis: The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

Condition 31, Bulk Material Handling, Construction, and Industrial Activities

Applicability: Bulk material handling requirements apply to the Permittee because the Permittee will engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the facility.

This condition applies to operating permits for facilities that contain one of the following sources: coal-fired boilers; coal handling facilities; construction of gravel pads or roads that are part of a permitted facility or other construction that has the potential to generate fugitive dust that reaches ambient air; commercial/industrial/municipal solid waste, air curtain, and medical waste incinerators; sewage sludge incinerators not using wet methods to handle that ash; mines; urea manufacturing; soil remediation units; or dirt roads under the control of the operator with frequent vehicle traffic.

Factual Basis: The underlying regulation, 18 AAC 50.045(d), requires the Permittee to take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air.

Not all facilities have the potential to generate fugitive dust during the life of the permit. The department will determine whether precautions are reasonable based on a variety of factors, including the distance to the facility boundaries, nature and content of the dust, proximity to neighbors, and the nature of the activity. This condition applies to the types of sources or activities that are likely to generate fugitive dust as identified above. It allows the precautions that are identified under the permit to be appropriate and specific to the activities conducted by the Permittee.

Condition 32, Stack Injection

Applicability: Stack injection requirements apply to the facility because the facility contains a stack or source constructed or modified after November 1, 1982.

Factual Basis: The condition prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 33, Open Burning

Applicability: The open burning state regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the facility.

Factual Basis: The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the facility.

No specific monitoring is required for this condition. Condition 33.5f requires the Permittee to keep "sufficient records" to demonstrate compliance with the standards for conducting open burning, but does not specify what these records should contain.

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Additional monitoring is achieved through condition 34, which requires a record of complaints. Therefore, the department does not believe that additional monitoring is warranted.

Condition 34 - 35 Air Pollution Prohibited

Applicability: Air Pollution Prohibited requirements apply to the facility because the facility will have emissions.

Factual Basis: The condition prohibits the Permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is required to report any complaints and injurious emissions. The Permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the department.

The department will determine whether the necessary actions were taken. No corrective actions are necessary if the complaint is frivolous or there is not a violation of 18 AAC 50.110, however this condition is intended to prevent the Permittee from prejudging that complaints are invalid.

Condition 36, Permit Renewal

Applicability: Applies if the Permittee intends to renew the permit.

Factual Basis: The Permittee is required to submit a complete application for permit renewal by the specific dates applicable to the **Deadhorse Soil Remediation Unit.** as listed in this condition. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal. No additional requirements are necessary to ensure compliance with this condition.

Condition 37, Requested Source Tests

Applicability: Applies because this is a standard condition to be included in all permits.

Factual Basis: The Permittee is required to conduct source tests as requested by the department. Monitoring consists of conducting the requested source test, and no recordkeeping or reporting requirements are necessary to ensure compliance with this condition.

Conditions 38 - 40, Operating Conditions, Reference Test Methods, Excess Air Requirements

Applicability: Applies because the Permittee is required to conduct source tests by this permit.

Factual Basis: The Permittee is required to conduct source test as set out in conditions 38 through 40. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. The test reports required by condition 43 adequately monitor compliance with conditions 38 through 40, therefore no additional MR&R requirements are necessary to ensure compliance with these conditions.

Conditions 41 - 43, Test Plans, Notification & Reports

Applicability: Apply because this is a standard condition for source tests. The Permittee is required to conduct source tests by this permit.

Factual Basis: Because this standard condition supplements specific monitoring requirements stated elsewhere in this permit, no MR&R is required. The source test itself is adequate to monitor compliance with this condition.

Condition 44, Particulate Matter (PM) Calculations

Applicability: Applies when the Permittee tests for compliance with the PM standard.

Factual Basis: The condition incorporates a regulatory requirement for PM source tests. Because this condition supplements specific monitoring requirements stated elsewhere in this permit, no MR&R is required to ensure compliance with this condition.

Condition 45, Certification

Applicability: This is a standard condition to be included in all permits. Applies because every permit requires the Permittee to submit reports.

Factual Basis: This condition requires the Permittee to certify all reports submitted to the department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the facility report, even though it must still be **submitted** more frequently than the facility operating report. This condition supplements the reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

Condition 46, Submittals

Applicability: Applies because the Permittee is required to send reports to the department.

Factual Basis: This condition requires the Permittee to send submittals to the address specified in this condition. Receipt of the submittal at the correct department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

Condition 47, Information Requests

Applicability: Applies to all Permittees, and incorporates a standard condition

Factual Basis: This condition incorporates a standard condition in regulation, which requires the Permittee to submit information requested by the department. Receipt of the requested information is adequate monitoring.

Condition 48, Recordkeeping Requirements

Applicability: Applies because the Permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional MR&R is required.

Condition 49, Excess Emission and Permit Deviation Reports

Applicability: Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The condition does not mandate the use of the department's reporting form, but it does specify that the information listed on the form must be included in the report.

The reports themselves and the other monitoring records required under this permit provide an adequate monitoring of whether the Permittee has complied with the condition. Therefore, no additional MR&R is necessary to ensure compliance with this condition.

Table D - List of State Excess Emission Reporting Requirements[10]

Condition	
5.1c(i) and 5.2c(i)	Whenever the fuel combusted causes sulfur compound emissions to exceed the standard of condition 5
22	If any CEMS is inoperable for 3 or more days.
35.1	If emissions pose a threat to human health or safety.
62.2a	If the results of a Method 9 observation exceed an average of 20% for any six minute period.
62.2b	If monitoring not performed when required.
65.1a	If the results of any PM test exceed the limits in condition 4.

Condition 50, Facility Operating Reports

Applicability: Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit and does not need any MR&R. The reports themselves are adequate monitoring for compliance with this condition.

Table E - List of Documents to be Attached to the Facility Operating Report[11]

Condition	Parameter	Description
5.1c(ii)	Fuel oil sulfur content	The fuel sulfur content records or the fuel grade of each shipment. All material balance calculations.
5.2c(ii)	Fuel gas H_2S content	The certified semiannual statement from the fuel supplier. Any sulfur content analyses.
35.3b (Air Pollution Prohibited)	Emissions that present a threat to human health or safety	A brief summary of: ➢ the number of complaints received, ➢ the number of complaints found by the Permittee or the department to be valid, ➢ the number of complaints for which the Permittee took corrective action within 24 hours, and ➢ the status of the complaints not corrected within 24 hours.
50.2	Excess emissions	A summary of all excess emissions and permit deviations reports submitted under condition 49 that occurred during the reporting period

[10] This table is for informational purposes. It does not relieve the Permittee of any requirements stated in Operating Permit 244TVP01.
[11] See footnote 10.

Condition	Parameter	Description
	reports	(see Table D above).
60.2	Visible Emissions	Written records of the starting date, the completion date, and a description of any corrective actions taken under the Smoke/No Smoke Plan.
62	Visible Emissions	Identification of which visible emission plan for each source. For the Method 9 Plan, copies of the observation results. For the Smoke/No Smoke Plan, identification of the number of calendar days that smoke was observed for each source, and copies of written log required by condition 61.2.
64	PM	The exhaust stack diameter (with first or second operating report only).
66	Hours of operation	Report the number of hours not operated, operated on gaseous fuel and operated on liquid fuel for Source #2

Condition 51, Annual Compliance Certification

Applicability: Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no MR&R is needed.

Condition 52, Credible Evidence

Applicability: Applies to all permits.

Factual Basis: This condition clarifies that any credible evidence can be used to verify compliance with the permit, not just the monitoring required under the permit. This condition is necessary to ensure compliance with the Clean Air Act. No MR&R is necessary for this condition. If the condition refers to a source subject to an NSPS the requirements of 40 C.F.R. 60.11(g) apply.

Conditions 53 - 59, Standard Conditions

Applicability: Applies because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions required for all operating permits.

Conditions 60 - 66 (Section 13), Visible Emissions and PM Monitoring Plan

Applicability: Applies because these conditions detail the monitoring, recordkeeping, and reporting required in conditions 3 and 4.

Factual Basis: Each permit term and condition must include MR&R requirements showing verifiable compliance with each permit term and condition. The Permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Facility Operation and Maintenance Program, that the facility is in continuous

compliance with the State's emission standards for visible emissions and particulate matter. The correlation between particulate matter and visible emissions that is the basis for this monitoring procedure is discussed under conditions 3 and 4.

These conditions detail a stepwise process for monitoring compliance with the State's visible emissions and particulate matter standards for liquid and gas fired sources. Equipment types covered by these conditions are internal combustion engines, turbines, heaters, boilers, and flares. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program.

Monitoring frequencies for hydrocarbon fuels, both liquid and gaseous, are detailed in these conditions. The monitoring intervals for gaseous fuels are less frequent than for liquid fuels in recognition of the reduced propensity of gaseous fuels to produce particulate matter as a result of combustion. This reduced level of monitoring for individual facilities in conjunction with the very large number of gas fired sources in Alaska should provide the department with sufficient data to evaluate the compliance history of these sources as a category.

Reasonable action thresholds are established in these conditions that require the Permittee to progressively address potential visible emission problems from sources either through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded.

The visible emissions and PM Monitoring, record keeping and reporting requirements in this section are based on the standard condition for liquid fuel fired devices. The requirements of this section apply at all times to Source ID #1, the Soil Remediation Unit, as this unit utilizes a control device to control visible emissions and PM emissions for its industrial process. The department recognizes that both Source ID #1 and Source ID #2 are normally fired with gaseous fuel. That being the case, with a properly operating bag house for the SRU, the facility should have no problem meeting the standards in conditions 3 and 4. For the back up diesel generator, since diesel fuel is only used as a backup to the normal supply of gaseous fuel, the liquid fuel monitoring requirements of the standard permit condition do not apply until the annual operations of the backup diesel generator exceed 400 hours per calendar year on liquid fuel.

Attachment A

Attachment A consists of the emissions calculations submitted by Alaska Interstate Construction concerning the Soil Remediation Unit and backup diesel engine in this permit. The calculations were made for a worst case scenario where the SRU and diesel engine would be operated 24 hours a day for 365 days a year burning diesel fuel. This would be a condition where the highest potential to emit could be realized. The SRU has not operated anywhere near this amount in recent years. When it did, it operated using pipeline quality natural gas as fuel that considerably reduces emissions from what is calculated here. The backup diesel generator is only used when electrical power from outside sources is not available. When the diesel generator is used it is also normally fueled with gaseous fuel. The liquid diesel fuel is only used in the rare occasion when no electrical power and no gaseous fuel are available.

PTE Calcuations

Soil Remediation Unit

25 tons/hr
359.7 gal/hr
12,000 scfm, baghouse specifications

SRU Diesel #2

Pollutant	Emissions rate	Source	ton/year
NOx	20 lb/1000gal	AP-42 table 1.3-2	31.5
CO	5 lb/1000gal	AP-42 table 1.3-2	7.9
SO2	0.5 wt %	Fuel Weight %	111.8
PM-10	0.02 gr/scf exh.	Baghouse	
VOC	0.252 lb/1000gal	AP-42 table 1.3-2	0.4

Petroleum Distillates

Pollutant	Emission rates	Source	ton/yr
NOx	20 lb/ kgal	AP-42 table 1.3-2	11.7
CO	5 lb/ kgal	AP-42 table 1.3-2	2.9
SO2	0.5 wt %	Fuel weight %	43.8
PM-10	0.02 gr/scf exh.	Baghouse	
VOC	0.556 lb/ kgal	AP-42 table 1.3-4	0.65

assumptions:
*2% of soil weight is petroleum distillates.
*Maximum of 0.5% wt percent of sulfur in petroleum distillates.

SRU

Totals	ton/yr
NOx	43.2
CO	10.8
SO2	155.6
PM-10	9.0
VOC	1.1

SRU Sample Calculations:

SRU Diesel #2

NOx:

(20 lb/1000 gal) x (359.7 gal/hr) x (8760 hr/yr) x (1/1000 1000gal/gal) x (1/2000 ton/lb) = 31.5 ton/yr

Petroleum Distillates

NOx

(25 ton soil/hr) x (8760 hr/yr) x (2000 lb soil/ton soil)x(0.02 wt % petro) / (7.5 lb/gal) / (1000 gal/kgal) x (20 lb NOx/kgal) / (2000 lb/ton) = 11.7 ton NOx/yr

SO2

(25 ton soil/hr) x(8760 hr/yr) x (2000 lb soil/ton soil) x(0.02 wt % petro) x (0.005 wt % S in fuel) x (2 lb SO2/lb S) / (2000 lb/ton) = 43.8 lb SO2/yr

Particulate Matter:

(12,000 scf exhaust/min) x (60 min/hr) x (8760 hr/yr) x (0.02 gr / scf exhaust) / (7000 gr/lb PM-10) / (2000 lb/ton) = 9.0 lb PM/yr

Backup Generator

470 hp
350 kW
8,760 hr/yr

Assume worst case of #2 Diesel

Pollutant	Emission rate		Source		ton/yr
NOx	0.031	lb/hp-hr	AP-42	table 3.3-2	63.8
CO	0.00668	lb/hp-hr	AP-42	table 3.3-2	13.8
SO2	0.5	wt %	Mass Balance		7.2
PM10	0.0022	lb/hp-hr	AP-42	table 3.3-2	4.5
VOC	0.00247	lb/hp-hr	AP-42	table 3.3-2	5.1

Sample Calculation

NOx:

0.031 (lb/hp-hr) x 8760 (hr/yr) x 470 (hp) / 2000 (lb/ton) = 63.8 ton NOx/yr